

REMARKS

Claims 11-31 are pending and stand rejected. Applicants traverse these rejections as follows.

I. Drawings

The drawings were objected to because “they do not include the following reference sign(s) mentioned in the description: 11.” Applicants are filing herewith a proposed drawing amendment amending FIG. 1 to include the reference sign 11. Withdrawal of this objection is requested.

In addition, the Office Action states that the “figures showing a cross-sectional view of the invention are improperly crosshatched.” Applicants are filing herewith a proposed drawing correction to address this issue. Withdrawal of this objection is requested.

II. Claim Rejections - 35 USC § 102

Claims 11-16, 18-24, and 26-30 stand rejected as anticipated by U.S. Patent No. 6,246,115 to Tang. Applicants traverse this rejection on the basis that Tang does not disclose “the shield element being electrically connected to a portion of the metallization layer” as recited in claim 11. The Tang legs 321 support the Tang heat sink 32 (FIG. 2). In FIG. 2, however, the Tang legs 321 are separated from the conductive traces 303 by an insulative structure. Tang does not teach that the heat sink 32 or the legs 321 are electrically connected to the conductive traces 303. Accordingly, Applicants submit that claim 11 is not anticipated by Tang because the Tang legs 321 are not “electrically connected” to the Tang conductive traces 303. Withdrawal of this rejection is requested.

Claims 12-20 depend upon claim 11 and are allowable for at least the same reasons as claim 11. Withdrawal of these rejections is requested. Applicants submit that these claims also recite additional features not shown in the prior art. For example, Applicants are amending claim 12 to recite “the shield element is electrically attached to at least one of the bond fingers.” Applicants submit that Tang does not disclose a shield element electrically connected to a bond finger. Withdrawal of the rejection of claim 12 is requested.

Applicants also specifically traverse the rejection of dependent claim 14 on the basis that Tang does not teach “the side surfaces being joined to the top surface and to each other with rounded corners.” The side surfaces of the Tang legs 321 are not joined to the planar top surface 322 of the heat sink 32 with a rounded corner. As shown in FIG. 2, the planar top surface 322 of the Tang heat sink 32 terminates at a sharp edge. The side surfaces of the legs 321 are separated from the top surface 322 of the Tang heat sink 32 by tongues 325. Thus, no rounded corner is present between the top surface 322 of Tang and the planar side surfaces of the Tang legs 321. Withdrawal of the rejection of claim 14 is requested for this additional reason.

Applicants also specifically traverse the rejection of dependent claim 15 on the basis that claim 15 recites that the shield element comprise “a horizontal top surface” and “at least one vertical side surface, the side surface being joined to the top surface with a rounded corner.” In this regard, Applicants submit that the side surfaces of the Tang legs 321 and the top surface 322 of the heat sink 32 are not positioned in a horizontal/vertical relationship, which would require a substantially perpendicular or orthogonal relationship between them. Rather, these surfaces are not positioned substantially perpendicular or orthogonal relative to each other and, thus, do not comprise horizontal and vertical surfaces. Additionally, and as discussed above with respect to claim 14, the corners between the Tang top surface 322 and

the side surfaces of the legs 321 are not rounded. Withdrawal of the rejection of claim 15 is requested for this additional reason.

Applicants also specifically traverse the rejection of dependent claim 18 on the basis that Tang does not disclose any correspondence between the legs 321 and the conductive traces 303. Hence, Tang does not satisfy claim 18's requirement for "a plurality of legs attached to a corresponding plurality of the bond fingers." Withdrawal of the rejection of claim 18 is requested for this additional reason.

Applicants submit that independent claim 21 is not anticipated by Tang at least by reciting "a metal screen enclosing the semiconductor device and *electrically* and mechanically *attached* to a portion of the metallization pattern." (Emphasis added). As discussed above, the Tang heat sink 32 is not disclosed as being electrically attached to the conductive traces 303.

Claims 23-28 depend upon claim 21 and are allowable for at least the same reasons as claim 21 is allowable. Withdrawal of these rejections is requested. These claims also recite additional features not disclosed by Tang. For example, Applicants are amending claim 22 to recite that "the shield element is electrically attached to at least one of the bond fingers." Applicants submit that Tang does not disclose a shield element "electrically attached" to a bond finger. Withdrawal of the rejection of claim 22 is requested.

Applicants also traverse the rejection of claim 23 for reasons similar to those set forth above with respect to claim 14. Withdrawal of the rejection of claim 23 is requested for this additional reason.

Applicants are amending claim 26 to recite that the metal screen comprises "a plurality of legs electrically attached to a corresponding plurality of the bond fingers." Applicants

submit that Tang does not teach or suggest this limitation. Withdrawal of the rejection of claim 26 is requested for this additional reason.

Applicants also traverse the rejection of claim 28 on the basis that Tang does not disclose a bond finger having “a concave upper surface shaped to receive the convex lower surface of the leg.” Applicants submit that Tang does not teach a bond finger with a concave upper surface. Withdrawal of the rejection of claim 28 is requested for this additional reason.

Applicants traverse the rejection of independent claim 29 on the basis that Tang does not disclose a “shield element being electrically connected to a portion of the metallization layer.” As discussed above, the Tang heat sink 32 is not disclosed as being electrically connected to the conductive traces 303. Withdrawal of the rejection of claim 29 is requested. Claim 30 depends upon claim 29 and is therefore allowable for at least the same reasons as claim 29.

In addition, Applicants are amending claim 30 to recite that “the shield element is electrically attached to at least one of the bond fingers.” Applicants submit that Tang does not teach or suggest this feature as discussed above. Withdrawal of the rejection of claim 30 is requested for this additional reason.

III. Claim Rejections - 35 USC § 103

Claims 25 and 31 are rejected as unpatentable over Tang in view of Hoffman (U.S. Patent No. 5,805,427). Applicants submit that claims 25 and 31 depend from claims 21 and 29, respectively, and are allowable for at least the same reasons as their respective base claims. Withdrawal of these rejections is requested.

Claim 17 stands rejected as unpatentable over Tang in view of McCormick (U.S. 5,909,057). Applicants submit that claim 17 depends upon claim 15 and is allowable for at least the same reasons as claim 15 is allowable. Withdrawal of this rejection is requested.

CONCLUSION

Applicants submit that the present application is in condition for allowance and request such action. Should there be any questions concerning this response, the Examiner is invited to call the undersigned at (415) 217-6000.

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Respectfully submitted,



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ATTACHMENT A
VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the following, additions are underlined and deletions are shown in brackets.

12. (Amended) The semiconductor chip package of claim 11, wherein the metallization layer comprises:

a die pad formed on the substrate; and

a plurality of bond fingers formed on the substrate;

wherein the semiconductor die is attached to the die pad; and

wherein the shield element is electrically attached to at least one of the bond fingers.

22. (Amended) The shielded semiconductor device package of claim 21, wherein the metallization pattern comprises:

a die pad formed on the substrate; and

a plurality of bond fingers formed on the substrate;

wherein the semiconductor die is attached to the die pad; and

wherein the shield element is electrically attached to at least one of the bond fingers.

26. (Amended) The shielded semiconductor device package of claim 21, the metal screen comprises a plurality of legs electrically attached to a corresponding plurality of the bond fingers.

30. (Amended) The semiconductor chip package of claim 29, wherein the metallization layer comprises:

a die pad formed on the substrate; and

a plurality of bond fingers formed on the substrate;

wherein the semiconductor die is attached to the die pad; and

wherein the shield element is electrically attached to at least one of the bond fingers.